An address on the climate, soil, resourses, development, commerce and future of the Upper Peninsula of Michigan, delivered in ... 1861, by Alex. Campbell, of Marquette

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Legislature, 1861.} { House Doc. No 24.

From Alex. Campbell

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[No. 24.]

AN ADDRESS on the Climate, Soil, Resources, Development, Commerce and future of the Upper Peninsula of Michigan, delivered in Representative Hall, at Lansing, February 6, 1861, by Alex Campbell , of Marquette.

Mr. Lockwood offered the following:

Resolved, That 5,000 copies of the address of the Hon. Alexander Campbell, on the resources and prospects of the Upper Peninsula of Michigan, be printed, 1000 of which shall be placed in the hands of Mr. Campbell, and the remainder for the use of the members of the Legislature;

Which was adopted.

THE UPPER PENINSULA,

Less than twenty-four years ago tho Upper Peninsula became a part of the State of Michigan. At the time it was considered a comparatively worthless territory—its geographical position being unfavorable to agriculture—its climate frigid and unfriendly to all the pursuits we had come to regard as necessary in the settlement of a State.

The man who would have predicted the development that has followed—the opening of such exhaustless wealth—the existence 2 of flourishing villages—the seats of future cities#and its already large commerce, would have bee called a foolish dreamer.

But far back of the date we name, there was a man—the farseeing sage and philosopher, Dr. Franklin—when, as the American Minister in Paris, he was fixing the boundary line between the United States and Great Britain, *saw something of the importance of this country in the future.* At the time he had access to the journals and charts of a corps of French engineers that had sloops and were exploring Lake Superior when Quebec fell to the British, “from which charts,” he tells us, he “drew the line through Lake Superior, to include the most and the best of the copper to the United States, and,”says he, *“the time will come when drawing that line would be considered the greatest service he ever rendered his country.”* *

* See Whitney and Foster's Report of the Copper Regions.

If, then, when the General Government transferred the Upper Peninsula to Michigan, there were none to regard it as an important acquisition, we rejoice that there was, quite a half century before, a man—a true friend to his country—who, in the discharge of his duties, had the industry to find and the sagacity to secure a territory the development of this hour proves to have been a great service—not to say the greatest he ever rendered his country.

In order that the people of Michigan may know more of this very important part of the State, which for the last few years has been attracting general attention, I will endeavor to bring more fully before the public mind its climate,soil,resources, commerce, and future.

The general impression everywhere seems to be that the climate of the Lake Superior country is frigid and severe beyond endurance—that for sufficient reasons it may be tolerated, but is nevertheless a sort of affliction. This feeling prevails especially in regard to its winters. How often I am asked—"How do you manage to keep warm there in the winter—I should thick you would freeze to death." This utterance expresses the common 3 notion of the frigidness of the country, *but is it the experience of its people?* It is true that the mean temperature of that climate is a few degrees lower * than in the latitude of Detroit or Chicago; it is also true that its snowy season is some longer and its snows some deeper, but such is the pureness, dryness and vitality of the atmosphere, that it is truly an elixir. Such is the bracing and life-giving power of the summer air, that it has become more than a Saratoga for the jaded business man and the invalid, and in almost every instance those who have thus sought recuperation and life have been rapturous in their praises of its invigorating influences. Such of course do not spend their winters there, their vocation being elsewhere, or the winter air too powerful for the consumptive, unless in its incipient stages. But among its most valued citizens are hundreds who owe their lives to the recuperating agencies of the climate, and the experience of all is *that the winters are the pleasantest part of the year.* The vitality and life it imparts are a positive luxury. They know nothing of the debility, the sallow-feebleness, feverish colds and barking coughs of the damp, depressing, changing climate of the lower latitude. Animal and intellectual vigor, vivacity and a full flow of healthful spirit is their blest heritage. And what is existence without health? What are days and years without physical life? Indeed, the full possession of these, the country and climate that will secure the most perfect development of physical being, must ever be the home of the greatest human happiness, and because the inhabitants of this peninsula possess these blessings in an eminent degree, their universal testimony is,"If I only spend one-half of the year on the lake, I shall choose the

winter.” No happier or healthier people exist; their whole being gushing with a full tide of life, and neither the climate nor the winter's air will ever prove an objection to making the country a home, the practical pursuits of life being remunerative.

* The average for the year is 7° lower.

This peninsula has become a very important of our State. It embraces an area of 16,237 square miles—territory sufficient 4 for a State—the cost of which is washed with the water of Lakes Michigan, Huron, the St. Mary's River and Lake Superior; in all a coast border of nearly one thousand miles, and enriched with some of the finest natural harbors in the world—as Bay de Noquette, Mackinaw, Detour Whiskey Bay, Grand Island and L'Anse. In this respect the country is favored with peculiar natural advantages for the productiveness of its commerce, which is destined to assume a magnitude the most credulous are not now willing to admit. I would not, however, be understood as saying that the commerce of this peninsula does not now, or will not hereafter, need other improvements to facilitate and render secure the property and lives of its citizens; for these are now in constant hazard at the different business centres, for the want of such improvements.

The great interest, and that which gives primary and principal importance to the country, are its mineral deposits. But because these—the copper and the iron—thus far have given it such prominence, we must not conclude that it is barren of all other advantages.

A very important branch of business, and which, with the proper protection, will long continue a profitable and increasing field of industry, are the fisheries that now exist, or will hereafter be established. I see from the Report of the Superintendent of the Sault Canal, that in 1859 there passed through it 4359 barrels of fish. The year just closed, the amount was 4051 barrels, and if the amount consumed on the lake were added, the aggregate products would not be less that 6000 barrels. The northern part of Lake Huron, the Straits of Mackinaw, the northern part of Lake Michigan, the St. Mary's River, and most of the south shore of Lake Superior, all border upon, and so far as the fisheries are concerned, belong to this peninsula, and abound with the finest fresh water fish in the world, known

as the White Fish and Mackinaw Trout. But, if the State would preserve these fisheries, and make them a permanent benefit, the Legislature will enact a stringent prohibitory law against “pound fishing;” for if this mode is continued, its will in 5 a few years depopulate to a good extent these Bays and Lakes, keep the market glutted and depreciate their value. Sein and net fishing are the only modes that should be legalized as a branch of industry —as this would be remunerative—will protect the fisheries against premature exhaustion, and render healthy the commerce of this very important article.

Nor is this peninsula without advantages as an agricultural region. It is true, it is not, and never will be, so well adapted to this branch of industry as Illinois or lower Michigan; but in many respects, and in soil especially, it is as far ahead of a large portion of New England, as Illinois is ahead of it. There the country along the lake shores—and that is only what visitors to that country see—is not the most inviting to the farmer. Here are the mineral deposits. Very generally this part of the country is uneven, rocky and mountainous. In going from Marquette by railroad to the iron mountains, the locomotive the first thirteen miles, carries you up an elevation of 850 feet above the level of the lake, and at some points you will pass cliffs of rock piled up in small mountains. What is known as the copper or trap range, running from Keweenaw Point to the Montreal River, the face of the country is more uneven, in places rising from five to twelve hundred feet above the level of the lake; frequently presenting bold, stair-like cliffs, affording many scenes of wild, picturesque beauty.

But along these ranges, even, there is much good soil, where farming is now, or may be, carried on with success. The past year, Messrs. Anthony & White raised, on the Minnesota farm, belonging to the great Minnesota mine, 10,848 bushels of potatoes, 2,100 bushels of turnips, 150 tons of hay, and 100 tons of oats. Other parties raised, beside, 3,000 bushels of potatoes and turnips. Call the potatoes worth 50c. per bushel; the turnips 40c.; the hay $20 per ton, and the oats $40—the crop of Messrs. A. & W. was worth $1,300—a result produced upon but few farms anywhere, with the same labor.

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The “Lake Superior Miner,” of December 29, 1860, says: “The hay and oat crop of Ontonagon county was not less 6 than 700 tons, and the product of potatoes and turnips was certainly 25,000, and may have reached 30,000 bushels.” Other counties and mines have done as well, especially Houghton, Marquette and Chippewa; but I have not the product at hand. At Marquette, the iron region, all who have engaged in farming, reap good crops of hay, oats, potatoes, turnips, &c., in a ready market, at good prices and good pay; for until this branch of industry produces an excess of these staples, they will bring 25 per cent. more in that market than the same articles do below. Within the last two years quite a settlement of farmers has been formed a few miles south of Marquette, on the Chockalay River, and already they are reaping better returns than thousands of new settlers, of the same age, in more salubrious latitudes. In this locality there is a large tract of very desirable country—the soil being a rich loam—the timber largesized maple, mostly —the face of the land comparatively even, with small streams of living springs of the best water on almost every quarter section. Rare advantages exist here for successful farming for those who will improve them—this land being for the most part subject to private entry or pre-emption—a perpetual market near for all that can be produced. There is desirable land in this locality, sufficient for a large colony.

But other considerations that conduce to make farming a success in this country, beside the robust health enjoyed, fitting the farmer for his toil, is that he finds everywhere a ready cash market for all the wood he can furnish at a price not below $1 50 per cord. At Marquette, the blast furnaces and railroad make a market for great quantities. Along the copper range, the mining companies consume large amounts in running their engines and burning the copper rock; so that while the pioneer farmer of Lower Michigan and Indiana had to roll the large logs into piles and burn them, in order to get the land ready for a crop, in the Upper Peninsula he shares the double prosperity of a crop of hay, oats and potatoes in the summer and a crop of wood, if he chooses, at equally good prices, in the winter. In

addition, there is no better country in America for the manufacture 7 of maple sugar. Every farmer may have an orchard of ten or twenty acres of fine trees. The snow usually is deep and remains in the woods until April, while the warm sun of March produces an abundant flow of “sap.” If maple-sugar can be made with success and profit anywhere, it can here, and yet, strange to record, it is not made as yet except a little by the Indians.

Wheat, the great staple of the cereals, can be profitably produced in this climate. It has yet been cultivated to any considerable extent, for the reason that there are no facilities for manufacturing it; but Messrs. Sales & Cash, at Ontonagon, and persons at other points, that, as a matter of experiment, have grown it, in every case have, in quantity and quality, succeeded beyond their expectations. I know that the snows of that latitude are often deep, but they are dry and light. The rains of November farther south are snow there, and the snow that then falls before the earth is frozen remains until the following April, protecting the wheat all winter with a covering under which it is secure from the ice and wind often so destructive in milder latitudes.

Nor is this all. If you will visit the farm of Mr. Cash, near Ontonagon, on the bank of that river, in the month of July you will find in his garden as fine strawberries, currants, and other garden luxuries as you ever saw; and in his orchard the cherry, the plum, and the young apple mature or maturing.

But the best farming lands are south of the mineral deposits. From the base of these ranges to the State line is a very large territory, now almost an unbroken wilderness, with a surface comparatively level, a rich, productive soil, and good timber, where farming on a large scale may be inaugurated with success, the products always finding a ready market at the mines and the commercial towns on the lake. But this region will remain unoccupied for a long, long time, unless some efficient provision is made to open into and through it good highways, securing ingress and egress to those who will occupy and improve 8 the lands—a consideration the State cannot look to with to much care.

Farming, doubtless, never will be the principal pursuit of the people of this peninsula, yet this branch of industry is being inaugurated, and may with great profit increase with the rapid development that exists of the mineral interests, and though the length of the winters may militate against raising stock to profit, and the shortness of the season render the corn uncertain, yet wheat, rye, barley, oats, hay, beans, peas and potatoes—the staples of life—together with most garden luxuries, as currants, peas, radishes, cucumbers, strawberries, raspberries, and the hardier fruits of the orchard, as the apple, cherry, plum, and pear, will be raised in abundance, and some of them in great perfection. It is astonishing how rapidly and to what size some vegetables grow in that climate. Should I tell all I have seen of these products, they would be regarded, I fear, as “fish stories.” I will relate one sight. I saw at Marquette, in October last, a Norfolk turnip raised by D. Bishop, 1½ miles from town, that weighed 20 lbs.

Thus much for the agricultural resources and advantages of this country. I have perhaps occupied more time with this part of the subject than will be read with interest, but it is so generally misunderstood that I could not say less, and give the public mind any correct idea of the importance of this branch of industry.

It may be well to add before dismissing this subject, that the very articles that grow most luxuriantly and abundantly in that climate, are those that it must always cost the most to bring from abroad. Hay, oats, potatoes, turnips and barley are not only among the cheap products of Lower Michigan or Ohio, but they are also bulky, and the cost of transporting them to ports on Lake Superior is sometimes more than the original invoice. This advantage inures directly to the home farmer, and will, until an excess is produced, of which there is no danger for many years, if ever, as mining will doubtless always increase the fastest. Hence, the farmer can depend upon about the following 9 prices for his products of an average: hay, $18 per ton; oats, 50 cents per bushel; potatoes, 50 cents; turnips, 40 cents; barley, $1 25.

The great interest, that which is of paramount importance, so far as the sublime destiny of this peninsula is concerned, *are its minerals.* Without these, we are free to confess, that this part of the State would remain for long years an exceeding uninteresting territory.

The deposits of iron ore, which in fact is almost a pure oxide of iron—its analyses, both in Europe and America, demonstrating that it is 67 per cent. pure iron, or that a ton and a half of the ore will produce a ton of pig metal—these deposits exist in mountains peering up in some cases hundreds of feet above the surface, and extend over a large territory of country. Only three of these are now worked—the Jackson mountains, 14 miles from Marquette—the Cleveland, 16, and the Lake Superior, 17. But west and south-west from these are many others, and some which are much larger than either of the three named. Of this extraordinary deposit there is enough, for it doubtless never will be exhausted. A visitor last summer, who sat down to gaze upon one of these wonders of the world, mused thus to himself—"here is iron enough to construct a railroad around the globe, and then freight it for a thousand years." Such were his impressions of the magnitude of our mountain, which, when compared with the whole, is only "as the dust in the balance."

In the region of Lake Michigamma, interior about 40 miles from Marquette, the iron is not only abundant, but the country has also much greater growth of hard wood timber than nearer the Lake, as well as the very best water-powers, so that the ore, the fuel, and the power all concentrate, and when the railroad penetrates thus far, *if not before,* furnaces will make charcoal iron with great success. Doubtless much the largest amount of this *very rich* ore will always be exported and manufactured at or near the coal beds in Ohio and Pennsylvania; but this export creates the facilities for its successful manufacture 10 at home. While there is no good reason why pig iron may not be made with charcoal as cheap there, if all the material—the ore, fuel and power—exist, as anywhere else. It is also clear that perhaps even a better result may be produced by using bituminous coal. With the tonnage employed to move the ore, to a given extent, the coal can be taken to the ore much cheaper than it is to the coal. The time is at hand when the annual export of this

important staple will reach three hundred thousand gross tons, and in a very few years will greatly exceed this. The average freight to ports on Lake Erie will not be less than $2 50 per ton. In extremely dull seasons, or the dull part of the season, charters may be made at lower rates; but as a business of years, constantly increasing, demanding often more tonnage than is available, *profit and necessity* will compel the average and name. But the vessels thus employed have no return freight, and many of them must have a ballast and are glad to carry coal at 25c per ton, if they can have despatch in its discharge at Marquette. If, then, the vessels that deliver 300,000 tons of ore, only carry on an average a one-fourth cargo on return, they will deliver about 80,000 tons of coal, sufficient to make 40,000 tons of pig. With the cash to buy the raw material, the furnace so located that the ore, coal and flux can be delivered to it without transhipment or extra handling, the cost of a ton of bituminous coal pig will not now exceed $13 50, as follows:

1½ tons of ore, delivered, will cost, $4 00

2 tons of coal, delivered, will cost, 6 50

Flux, per ton, 50

Labor, per ton, 2 00

Wood and oil, per ton, 50

Total, $13 50

This is certainly a cheap product, the quality and value of the iron considered; *but the day has arrived* when it can be done, and when blast furnaces, properly located at Marquette, will prove better investments than at any other point.

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Beside the wonderful richness of this ore, its freedom from every baleful ingredient, and the strength of iron produced from it, another remarkable characteristic, is the facility

with which it is smelted. It is so much less refractory in the furnace, that with less coal a larger yield of pig is had, than from furnaces of the same capacity, with the lean ores of the Eastern and middle States. The Pioneer Iron Co. furnaces, located on the railroad, 14 miles from Marquette, are 9 feet in the boshes, and with an average of 130 bushels of coal to the ton, produce 12 tons each, of pig, per day. These furnaces are now run by contract, the company furnishing the wood, and paying the contractors, a specified price for coal, per ton of pig, and also per ton for its manufacture. This system removes many contingencies—reduces the cost of the pig an arithmetical basis, and thus far is satisfactory to the corporation and the lessees. The Northern Iron Co. furnace, located 4 miles down the Bay from Marquette, near the mouth of the Chockalay River, is 10 feet in the bosh, and with bituminous coal, produces 20 tons of pig per day.

In 1858, Stephen R. Gay, Esq., built the Phelps Furnace, 3½ miles from Marquette, on Dead River, which went into operation about January 1, 1859. Its bosh is 9 feet, and the cost of its erection about $15,000. For two years it has performed in every way satisfactorily, producing at first 8 tons per day, and afterwards 10. The cheapness of this structure, the economy with which it is worked, and its success, induced Mr. Gay, the past season,to erect another, one mile distant from this, known as the Forest Furnace. This is about the same capacity, but costing less than $14,000. This one went into blast early in December, 1860, and is producing, I learn, an average of 10 tons of pig day.

Mr. Gay contracts for all his coal made and delivered at a specified price per ton of iron, while all other labor, as far as possible, is let to the lowest bidder. Thus with the comparative small investments of capital in the furnaces themselves, whatever may have been the discouragements and embarrassments 12 under which the smelting of iron ore at Marquette at first suffered, as all new adventures in new countries must, time and experience has thus to a good extent obviated, and to-day charcoal pig is made there so that for $20 cash upon the dock, a very *satisfactory* margin is left to the manufacturer.

As an item of interest, I add the following results of the numerous experiments of Prof. Walter R. Johnson on the tenacity of bar iron in various parts of the world:

Strength in lbs. per square inch.

Iron from Salisbury, Ct., 58.009

Iron from Sweden, 58.184

Iron from Centre Co., Pa., 58.400

Iron from McIntyre, Essex Co., N.Y., 58.912

Iron from England, (cable bolt E. V.), 59.105

Iron from Lake Superior, (by Maj. Wade,) 98.582

The process of mining the iron ore is both simple and cheap. There is no under ground work, but the ore is blasted from the side of the mountain on a level with the surface of the earth; thus a pependicular face is formed, and the larger this face the faster and cheaper it can be mined. A side track from the railroad runs along near this face, while the ore blasted off and broken up is loaded into the cars without extra handling. In some cases a cut is blasted into the mountain for a distance, securing a face on both sides from which it is mined. Rails are placed in the centre of the cut, the cars run in and loaded from both sides.

Copper Range

West of the deposits is the great trap, or copper range,running a distance of 150 miles and from one to twelve miles wide. On this range are located the Cliff, Pewabic, Quincy, Franklin, Isle Royal, Minnesota, and National Mines, together with many others well known to the public, now yielding, in the infancy of their existence, over 9,000 tons of native

copper per annum. But while the iron is piled up in mountains above the surface, the copper is buried deep in the earth and rock, so that while a comparatively small capital will mine successfully the iron, in many cases it requires large sums to blast out and open doorways 13 to the copper. But shall we call this an unwise arrangement? If the iron ore, which is only worth $3 per ton delivered free on board vessels at Marquette, had been hid deep in the earth as the copper is, it would remain there while the world stood. But the copper is worth over $300 per ton on the dock, so that its value is a motive to open ramifications through and deep into the mountains to find the hidden treasure. I know there has been much, too much, of copper-stock jobbing, and thousands have felt themselves robbed, and in many cases they have been; but notwithstanding all this, the development of this interest has gone steadily forward, rewarding prudent and persevering effort, and confounding the incredulous.

It is now but fifteen years since copper mining was inaugurated in that country, and but five years since the Saut Canal was opened, securing increased facilities and a cheaper commerce, and to-day the mines of Lake Superior raise an annual product of copper exceeding one-half of the amount produced in the United Kingdoms of Great Britain.

But what has been done—all that is actually known of this valuable deposit is but the character of the copper alphabet, or but as the title page, or but the formal p b leadings of a few chapters in Michigan's Copper Book, that will yet be read, and seen, and known.

Copper Range

The fact is settled in the mind of every Lake Superior “copper head,” that in that range of 150 miles there are many more Cliff, or Pewabic, or Quincy, or Minnesota, or National deposits, that time and money and science, will develop. We have only had the morning of copper wonders—the splendors and glory of their noonday is yet to come. This great range is for the most part yet only a wilderness; a few almost impassable roads crossing it—here and there a mine breaks its solitude—ever and anon the explorer winds his way

among crags or thick wooden forests in search of an outcrop, and as often he passes and repasses what, if it were only uncovered and known, would excite the copper nerve of Boston, as an electric charge from a galvanic battery. But this range will continue to be explored and 14 re-explored—the rubbish cleared away—every indication and outcrop minutely traced—new lights will help—success will follow success, until the development will be complete.

Previous to 1855, the development and commerce of this country was neither rapid nor remunerative, because of the disadvantages under which it labored. Its tonnage was not large, or of a reliable character, while freights were enormous. Capitalists were fluctuating between hope and fear; the falls of the St. Mary's River, at the Saut, was a natural embargo, subjecting imports and exports to a tedious portage and heavy tax. But the construction of the Saut canal, by a donation of public lands by the General Government, and its opening in 1855, proved a remedy for many of these evils, and at once gave tone and shape to the future of the country. First class steamers and vessels now sail from Buffalo and Chicago to all the ports on Lake Superior, reducing freights, organizing business, securing dispatch, inspiring hope and placing all the business of the country on an entire new basis. From this time, then, we will more particularly trace the development and commerce of the country.

In 1855, Marquette, the port of the iron tread, was a flourishing little town, of a few hundred inhabitants; a plank road adapted to the transportation of ore by cars drawn by horses, on strap rail, placed upon the plank, was finished from Marquette to the Cleveland Iron Mountain, a distance of sixteen miles. A locomotive road was also in process of construction, and that summer the first locomotive, the “Sebastopol,” was place upon it Early in September, 1857, this road was pushed to completion, touching the Jackson and Cleveland Iron Mountains, and extending to the Lake Superior, then its termini. This road, together with its dock, warehouse, depots, machine shops and rolling stock, has cost about three-quarters of a million, and was truly a mammoth enterprise, in so new a country, and especially one that presented so many obstacles to railroad-building; but

the late Heman B. Ely, who inaugurated the enterprise, saw a rich prize in the future, *as it now promises,* and, 15 madly, as his action seemed to many, he labored incessantly for its completion, until death terminated them, in 1856. The road has now upon it four locomotives, and other rolling stock ready, or in process of construction, of sufficient capacity to bring to the lake, daily, 3,000 tons of ore. Its business for the last three years, has been as follows:

DOWN THE ROAD. Number Passengers Passenger Receipts UP THE ROAD. Year. Pig Iron. Ore. Merchandise. 1858 1627 30,556 tons 4629 $1,540 62 1,806 tons. 1859 4683 83,078 tons 6445 2,007 42 2,258 tons. 1860 3560 150,903 tons 5487 1,989 92 2,124 tons.

The exports of ore to Detroit, Cleveland and other points, have been as follows:

Year. Gross Tons.

1855, 1,447

1856, 11,597

1857, 26,184

1858, 31,035

1859, 65,679

1860, * 113,847

* Of the 150,903 tons which came down the railroad, some 30,000 are now upon the docks at Marquette.

There has also been manufactured and exported in pig iron, in 1858, 2,000 tons; in 1859, 6,000; in 1860, 5,500.

In 1855 the ore was carried by the steamers, in 1856 a few vessels were employed, in 1857-8 the fleet was greatly increase, in 1859 forty vessels were principally employed in this trade, and in 1860 over seventy were employed, and prospectively this field promises the largest stable tonnage of the carrying trade. During the past three years there has also been erected near Marquette, as above noticed, five blast furnaces, which, if kept in blast, will produce hereafter not less than 15,000 tons of pig per annum. In 1855, the village of Marquette had a population of about 600; the county, 1100. Now the village exceeds 1500, and the county 3000.

The development and progress in the copper districts has 16 been no less wonderful since the date named. In 1855 Portage Lake was comparatively unknown—its population less than 1000—while no great interest was yet attracting special attention. To day they have a population of over 6000 souls; copper mines that are producing a monthly product of 150 to 330 tons. No man can now go to this interesting point, and behold the thrift everywhere apparent—the great number of new buildings that are being erected—the stir of the populace—the immense investments of capital—the copper cars as they thunder down the train roads to the lake—the prodigious quartz mills, and the power and success with which they stamp the copper rocks and separate the copper from the rock—the large merchandise that is carried on to supply so large a population; the new enterprises in the form of spacious docks, new hotels, foundries, stamp mills, smelting works—all this and more we might enumerate, cannot fail to make a deep impression upon an observing mind. Nor is this all. As these developments began to assume such proportions, some of the corporations and a few of the enterprising citizens of the place, in order to facilitate the commerce, appropriated $35,000 from their treasuries and pockets to open the harbor, known as “Portage Entry,” fourteen miles below the villages of Houghton and Hancock, which are located near the mines and on what is known in common place as “Portage Lake,” so that steamers of the largest class with a full freight, have been enabled to cross the bar, run up to the mines, discharge their cargo and receive the copper. Previous to this improvement, tugs and scows were used to transport the freight to and from the steamers,

which dropped their anchor in the lake outside of the “entry” to the docks at the mines, at a cost of $2 per ton. When the lake was rough, as was often the case, steamers could not discharge or receive freight. This difficulty is now obviated; the expense saved; while the business has much greater despatch.

There still remained a few short bends in the river or outlet of the lake, which it was difficult for steamers to get around, and the same parties have again contributed $15,000 to cut off 17 these, which, when completed, will give them an unobstructed navigation.

This will certainly be called magnificent progress.

At the other points on the Copper Range, Eagle Harbor, Eagle River, and Ontonagon, the development was much earlier than at Portage Lake, and first gave prominence and importance to the country. The celebrated CLiff Mine, whose annual product for over ten years has exceeded 1,500 tons, was opened in 1845. The Copper Falls, Central, and other Mines in the same District known as “Keweenaw Point,” were opened at a later day. The equally famous Minnesota Mine, in what is known as the “Ontonagon District,” and whose product the past year was 2,1800 tons, was opened in 1848. The National and Rockland, whose products are now large, were opened some years after. It was the early opening of these Mines, and their success under all the disadvantages which the country suffered at that early day, and the working of many others in the same districts, which have not yet been as successful, that for many years gave business and interest to the country, and now that other points with the light and facilities that existed, have bounded into being with wonderful development, in no way detracts from those whose entire success gave birth to all that has followed.

Copper districts

Notwithstanding the shipments of copper from the Portage district have exceeded this year largely the amount of any previous one—it being 3,238 tons—still Ontonagon is the banner

district, having shipped the past year 3,632 tons, or 394 more than her rising competitor. Which of these rich districts will ultimately rank *as the* district of the world, it is idle now to speculate. They both possess a fine area of rich and promising territory, which, when fully explored and opened, can alone determine the race. What prominence other districts, now budding into being, may take, would be equally speculative. Yet the fact is not to be disguised that has public eye, in search of copper, has fixed its gaze and hope upon what will be known as 18 the “Carp Lake district,” as a rich field also, as the explorations and workings demonstrate.

These districts are undergoing minute and thorough examination; mining is being reduced to method and system; a rigid economy in the practical application of money is enforced; improved machinery for crushing the copper rock and separating the copper from the rock is being introduced; efficient mining associations are being formed; these and other agencies are producing their legitimate results, *a large yearly increase of this metal until the mines of Michigan shall supply the world.*

The progress thus far made is apparent from the shipments since 1845. It was, in 1845, 1300 pounds; in 1846, 29 tons; in 1847; 239; in 1848, 516; in 1849, 753; in 1850, 640; in 1851; 872; in 1852, 887; in 1853 1452; in 1854, 2300; in 1855, 3196; in 1856, 5726; in 1857, 5759; in 1858, 5896; in 1859, 7245; in 1860, 9200 # . The aggregate value of the copper exported in 1845 was $390; in 1850 it was $266,000; in 1855 it was $1,437,000; in 1860 it was $2,914,000. in 1861 10,355 tons 33,500.000

Copper shipments from the of the mines

And who will not call this progress, up even to the fastest ideas of “Young America?”

“Irondom” may make a larger show of commerce than “Copperdom,” for often during the summer her beautiful “crow-boy” is enlivened with the presence of thirty sail, going or

coming or at anchor; but in point of value she must for the present yield the palm to the latter.

But the question arises, will this copper find a market at remunerative prices should the product increase to forty of fifty thousand tons annually? I answer, it will be many years before the product will be so large, although it doubtless will reach this time; while in all the important mechanic arts the world is increasing now as it never did before, and our own country is especially advancing in population and these arts with astonishing rapidity; thus creating a necessity for a large increase.

The world is also making rapid strides—I may say mighty ones in the accumulation of wealth—not only in the material development of the industrial interests, and the improvements 19 of the mechanic arts and other sources, *but in money itself.* California, Australia, and the other countries producing the precious metals are adding annually over one hundred millions to its specie basis— *that which underline every other species of wealth.*

The amount of rough copper mined 25 in

These agencies will make a demand for the largest possible increase of American copper, without any material decline in its present value. Already a large foreign demand exists for it. Although the mines of England are centuries old and have reached their maximum, yet to-day Europe is a large buyer of copper in American markets. This being the case, the Ontonagon District Mining Association have sent an agent to France—Mr. Artault—to represent in Paris the copper interest of Lake Superior, and it is to be devoutly hoped that his mission may not only furnish better information of the nature and magnitude of this deposit, as it exists on this lake, to that country, and secure a larger market for the copper, but that the will also enlist French capital to aid in its development. I append a statement taken from a letter addressed in Nov. 1860, by Mr. Artault, to the Secretary of the O. D. M.

A, showing the amount of copper used in France in 1859, and what portion of it came from the United States.

Consumption in France of pure copper ingots, for 1859:

Russia, 17,348 kelograms (2 lbs.)

Belgium, 302,628 kelograms

England, 5,478,322 kelograms

Asiatic towns, 1,067,000 kelograms

Spain, 329,289 kelograms

Roman States, 698,964 kelograms

Turkey, 260,573 kelograms

United States, 1,253,983 kelograms

Chili, 1,787,392 kelograms

Peru, 328,865 kelograms

Other countries, 614,808 kelograms

Total, 12,331,172 kelograms for ‘59, or 12,331 tons.

20

In my next I will send you some more very important documents. In 1853, the United States had exported to France only $105,060 worth of copper. In 1859, they have exported

to France the sum of $1,985,223, and every year it will increase in a very large way, particularly if we take the rank we must have if we exert ourselves.

Yours, respectfully, F. A. ARTAULT.

The facts developed in this statement from Mr. A. should not only engage the earnest attention of the people of the Upper Peninsula, *but of the State.*

By adding to the $2,944,000, the value of the copper shipments for the past year, $367,350 for iron ore, and $121,000 for pig iron, and $40,000* for fish from the Peninsula, and $20,000 for furs, we have an aggregate of $3,492,350— *the product of the labor of a few thousand freemen.*

* The fish from the Saut and Mackinaw are not embraced in this statement.

In 1845 an occasional steamer visited the Saut of St. Mary's, and above that parties worked their way from point to point mostly by coasting—the business was done by a schooner called the White Fish, and two others—but all of small burden. In 1850 three small vessels, two small steamers and one propeller, did the business between the Saut and ports on Lake Superior, while four steamers played between Cleveland, Detroit and the Saut. In 1855, the season the canal was finished, six steamers were engaged in this trade and were able to do all the business between ports on lakes Erie and Superior. In 1860, 70 vessels and 12 steamers were inadequate to do the business, and toward the close of the season special charters were made, two of which, the propellers Burlington and Globe, are now on that lake.

The tolls collected from the tonnage passing the canal each year since its completion, are as follows:

In 1855, $ 4,374 00

1856, 7,575 00

1857, 9,496 00

21

In 1858, $10,484 00

1859, 16,941 00

1860, 24,660 00

The Report of Mr. Mead, Superintendent, shows that in 1859 there passed through it in imports:

Barrels of flour, 39,459

Bushels of wheat, 74

Bushels of coarse grain, 71,738

Tons of ground feed, 1,104

Barrels of beef, 4,762

Barrels of pork, 5,902

Barrels of bacon, 345

Barrels of lard, 611

Pounds of butter, 342,421

Pounds of cheese, 54,742

Pounds of candles, 117,634

Pounds and boxes of soap, 2,205

Barrels of apples, 3,785

Pounds of dried fruit, 727,159

Pounds of sugar, 486,020

Bags of coffee, 1,112

Chests of tea, 598

Bushels of vegetables, 6,949,

Barrels of salt, 2,739

Barrels of vinegar, 300

Pounds of tobacco, 21,754

Tons of powder, 345

Tons of coal, 8,883

Kegs of nails, 3,632

Tons general merchandise, 10,134

Barrels of lime, 4,845

M feet of lumber, 7,749

Bundles of lath, 2,538,

Boxes of glass, 970

Tons of hay, 823

Mules and horses, 127

22

Head of cattle, 2,031

Head of sheep, 1,571

Head of hogs, 374

M brick, 3,409

Pieces of furniture, 7,623

Tons of machinery, 927

Boilers and engines, 17

Wagons and buggies, 130

Barrels of liquor, 7,312

Pounds of malt, 235,712

With the exports added, Mr. Mead estimates the total value of articles passing the canal that year, at $9,887,404 60.

His Report for 1860 shows that there passed through the canal the past year:

Barrels of flour, 50,250

Library of Congress

Bushels of wheat, 284

Bushels of coarse grain, 133,437

Tons of ground feed, 1,291

Barrels of beef, 4,897

Barrels of pork, 5,747

Barrels of bacon, 716

Barrels of lard, 719

Pounds of butter, 400,610

Pounds of cheese, 43,260

Pounds of candles, 241,708

Boxes and barrels soap, 3,583

Barrels of apples, 6,054

Pounds of dried fruit, 34,986

Pounds of sugar, 832,926

Bags of coffee, 1,758

Chests of tea, 1,347

Bushels of vegetables, 33,739

Barrels of salt, 1,817

Barrels of vinegar, 486

Pounds of tobacco, 74,186

Tons of powder, 650¼

23

Tons of coal, 15,542

Kegs of nails, 3,429

Tons of general merchandise, 10,289

Barrels of line, 5,109

M feet of lumber, 3,673

Bundles of lath, 1,555

Boxes of glass, 871

Tons of hay, 1,130

Mules and horses, 183

Head of cattle, 2,813

Head of sheep, 1,047

Head of hogs, 1,537

M brick, 325,870

Pieces of furniture, 12,157

Tons of machinery, 1,398

Boilers and engines, 24

Buggies and wagons, 119

Barrels of liquor, 9,317

Pounds of malt, 309,864

Barrels of fish, 4,051

With the exports added, the aggregate value of articles passing the canal this year is estimated at $12,158,865 94.

These reports demonstrate many important facts in relation to the extent, the value, and the growing importance of this country and its commerce; for whether they treat of its population, its mineral products, its shipping, its canal receipts, or its internal improvements, they all demonstrate the same truth—that no part of the State is augmenting its wealth and population so fast as the Upper Peninsula.

But a fact I desire especially to call attention to, is the interest the various branches of industry, and especially the farmer, the miller, the merchant and the mechanic, should feel in this country. What a market for their products and business! *The country only partially improved,* and yet it absorbs, annually, millions of produce and merchandise.

Turn again to Mr. Mead's report; estimate the value of the 24 flour, feed, coarse grain, beef, pork, butter, eggs, cattle, sheep and hay—the general merchandise—sugar, candles, soap, nails, wagons, furniture, coal—the powder, machinery, boilers and engines—and last, but not least, the whiskey. Estimate the yearly value of these, and many other articles

named, and then tell me who are benefitted by the country? There is not, especially, a farmer in the State—I mean the Lower Peninsula—who is not interested in, and benefitted by this trade. Ten years ago, the farmer had no market for his surplus coarse products —hay was a drug—oats were comparatively valueless. Eggs and butter were almost unsaleable in the season of their abundance; but these, and much more—for all that is sent to market—finds ready sale at remunerative prices. Detroit and Cleveland begin to estimate the value of the commerce of this country.

Thus has a large business, which is as yet only local, grown into being. In a few years a railroad communication will be opened from the west end of the lake with the Mississippi River, when it will at once increase an hundred fold. But is such a commerce to have no increased security? Must it be carried on with all its present extraordinary risks? Will the General Government do less to foster and protect the maritime of this lake than it has Lake Eric or Michigan? Does to “regulate commerce,” mean nothing more than to authorise the use of these waters, or to construct light houses? Does it mean to erect princely custom houses, but let the shipping in sight of them dash into ruin, upon the rocks? such is the genius of our government, that the people feel it should be as much interested in giving security to the property and lives of its citizens, while *in transitu* upon the public waters, as in the collection of imposts, or as the people are, in the development of the material resources of the country.

It has given the people a guarantee of its duty and identity with the security of commerce, in the erection of light houses, and especially to the people of this peninsula in the construction of the St. Mary's Falls Ship Canal. This magnificent work 25 reflects great honor upon the government, and is the cause of our rising greatness. How it has increased facilities, given value to its iron, inaugurated its manufacture at home, promoted the development of the copper districts and whitened the waters with its commerce. But having accomplished this, having created facilities that is producing such an international commerce, can the government leave it exposed to wind and wave without protection?

I need hardly say that every year life and property is being sacrificed, and in almost every instance, if the necessary harbors existed, they would be saved. The shipping at Marquette, already so large, is exposed to constant peril. The improvements made at the mouth of Portage Lake, by the energy and money of its citizens and corporations should be extended, the whole greatly strengthened to make it secure, and a light placed on the end of the pier. At Eagle Harbor every vessel that enters is exposed to great dangers, *and can do so only in a calm* Ontonagon is the oldest port on the lake and of great importance, it being central between Copper Harbor and Lapointe, a distance of 160 miles; but it is with great difficulty that a vessel can now enter with the most favorable weather. At every point of commercial importance there, with an annual business of over twelve millions, on a coast of 360 miles, the most of it bold, rocky and dangerous, there is not one secure or safe harbor.

Some years ago the people of this part of the State felt that the south—the lower peninsula—regarded them as insignificant and often—laws had been made to benefit the State—legislation for their benefit and comfort was mostly ignored. At this time there was some talk of secession—of being set back to the general government in order to organize ultimately a State government of its own. It was thought that this peninsula was so far removed from the State proper—that its interest were so different from those of the lower peninsula—that the Legislature could hardly ever know enough of its specific wants and character 26 to act understandingly in relation to it. For these and other seasons, a convention was at one time called to inaugurate a movement to secure its separation from the State and become a federal territory, but I believe no declaration of independence was passed. For a few years past but little has been said upon this subject—a better understanding has come to exist—the bonds of brotherhood and interest have grown stronger, and the Legislature is doubtless willing to do anything that is reasonable and just to promote the interest and development of this part of the State.

The bona fide inhabitants of this peninsula are not wealthy. They are, for the most part, worthy and hardy sons of toil—blasting out its wealth. Its rich men are few, and its wealth is owned and controlled by foreign capital—in Detroit, Cleveland, Pittsburgh, Philadelphia, New York and Boston. And the country owes its development to this capital. It would to-day be long years behind the proud position its occupies but for it. Foreign capitalists have poured out their money in its development—hundreds of thousands of dollars have been spent in search of copper for which no return has been made and probably never will be. But the thorough opening of the country will require large sums of money, and it should be the policy of the State to encourage the investment of capital to secure the desired consummation.

With the data I have adduced, we are safe in assuming that the business and future of this peninsula never rested upon a firmer basis than at the present; for if the past, with its uncertainty and difficulties has been so abundant in its rewards, the future with such success and certainty will be correspondingly fruitful with them.

What check the political and financial, derangements under which the country is laboring will have upon the next season's business cannot be definitely seen—of course they will have their effect—under the ordinary prospects of the country Marquette would report the coming year 200,000 gross tons of iron ore, and 12,000 tons of pig iron, giving employment to over 27 80 large sized vessels; the copper districts would make rapid advance in the better opening of the mines, and produce at least 12,000 tons of copper, which would give an aggregate export in 1861 of about 5,000,000.

In 1865—but a short period—the iron exports will exceed $2,000,000, the copper $8,000,000; the population will have doubled, the tonnage employed thribbled, and the destiny of the country placed upon a much higher basis.

Beyond this, I will not attempt to lift the veil that hides the wonders of the future—they doubtless will abound everywhere—but “irondom” and “copperdom” will have their full

quota. As in all ages peninsulas have been seats of power, so this once despised and frigid coast will grow cities, the seats of magnificent manufacture and commerce; her wealth will become the possession of her own people, with all its financial power, when she will be a tower of strength, immovable as her rocks—commerce doing reverence at her altars, and her fame known in every land.

Thus far I have treated only of what is embraced in Michigan, on Lake Superior. Wisconsin and Minnesota both have a line of lake coast, and in the former the coast embraces much good land, well timbered, with, I understand, valuable iron deposits. The population now, in this part of Wisconsin, is an important item in the trade of the country. The time is also nearing, when a commanding commercial city will grow into importance in this State, at or near the west end of the lake. The increasing business of Northern Wisconsin, of Minnesota, of Northern Iowa, of Nebraska and Dakotah Territories, and the Red River of the North, will, during the summer, be done with the seaboard, *via* Lake Superior. Immense tides of travel will reach all these States or Territories, by steam, from Oswego, Buffalo and Detroit, the same way. Lake Erie was once the theatre of a magnificent steamboat travel; but this new field may once day rival it. Highways and thoroughfares are now being opened from the lake to the Mississippi—soon they will reach the Missouri—then San Francisco—when steam from Detroit to 28 Bayfield or Superior will become a grand link in the commerce of the Atlantic and Pacific States of Europe and Asia.

And this is no chimera—for so they called Gov. Clinton's New York & Erie Canal when he proposed it—an enterprise in his day, the accomplishment of which was not an hundreth part as certain as these results. The “Great Northwest,” as it is *now* called, politically and commercially demands access to this lake and will have it—but another “Great Northwest” is coming into being in the settlement of the country near the head waters of the Mississippi and Missouri, and the Red River of the North—a territory quite as large as the original thirteen States, whose direct connection with the Atlantic sea-board will be *via* Lake Superior.

Nor is the accomplishment of this far distant. The commercial relation of Minnesota with this lake must become even more internate than those of Illinois with Lake Michigan, as well as Northern Wisconsin. But a glance at the map will show that it is no farther from ports on Lake Erie to the head of Lake Superior than to Chicago, so that freights to Bayfield or Superior will be no more than to ports on Lake Michigan, while at the former ports they are much nearer all points in Minnesota, *or territory west of her,* than at the latter. All then that is needed to add the business of Minnesota to the commerce of this lake is a railroad from the Mississippi River to it. But we may be asked, will the business of that new and northern State warrant such an investment? I answer with the statistics of Commissioner Wheelock, in relation to the growth and products of that State up to 1859 and 1860. He says:

“The Territory was organized in 1849, when most of the population of 6,400 souls were attached to the Indian trade. The National Census of 1850 gave the following result:

Wheat. Corn. Oats. 1849 1,401 16,725 50,582 1859 3,288,000 3,130,000 3,420,002

The real agricultural history of the State did not commence, however, till 1854, when the Sioux were finally removed: so that a fair comparison would be the following:

29 Acres tilled. Wheat. Corn. Oats. 1854 15,000 7,000 80,000 153,000 1859 454,000 3,288,000 3,130,060 3,420,000

Thus in five years from the actual commencement of her agricultural growth, Minnesota has produced a surplus of over 5,000,000 bushels of grain, and in the meanwhile has fed a population which has increased from 35,000 to 175,000.”

In relation to the crop of 1860 he says:

“1. That the tilled breadth of 1860 is one-third larger than 1859.

2. That the breadth of wheat sown was nearly doubled. This increase was very considerable in the south-eastern counties, but in the western and northern sections of the

State the area is three or four times as great, and more than half of the whole tilled breadth of the State was in wheat.

3. There was a large increase in the average yield per acre, variously estimated at from 15 to 30 per cent.

4. This fruitfulness extends to all crops, including corn, oats, potatoes and hay.

5. The head of the grain is better filled, and the grain better developed than it was last year.

6. The wheat crop has not met a single check, nor suffered from the depredations of a single insect, so far as ascertained.

7. The breadth of corn and oats planted is much less than last year, but if the is harvested without accident, the aggregate product will be more than half that of last year.

8. The wheat crop of Minnesota in 1860, with a yield of 23 bushes per acre, will reach an aggregate of over 6,000,000 bushels, of which 4,500,000 will be surplus; and that this is by fifty per cent, the largest recorded crop of wheat in proportion to the population, ever previously produced in any State of the Union, being more than half the whole crop of Ohio in 1859, and equal to 25 bushels of wheat to every individual in the State. The foregoing calculations are made upon an assured basis of fact, without reference to current opinions upon the subject."

The influence such figures must exert in the establishment of the best mediums of commerce, are too patent to need remark.

Good stage roads are penetrating this country from the towns on the lake. One has been opened from Superior to Crow Wing, and will be extended from there toward the

settlements on the Red River of the North. Another is being opened to St. Paul, and over these roads, during the winter, good stages are now run.

Another road has been opened between Bayfield and St. Paul. Hon. II. M. Rice informs me that good stages now run twice a week between Bayfield and St. Paul—that the road, a distance of 170 miles, is in splendid order—that they will so run until navigation opens, *when they will run tri-weekly or oftener.* This arrangement will induce a large travel the coming season via this lake to St. Paul and other points on the Mississippi river, and is the sure forerunner of a railroad.

The Pacific Railroad, or its northern route, should run from the head of Lake Superior; but if the Government starts it from the Missouri River, before the “iron horse” enters San Francisco from this river, under the energy of private enterprise, he will reach it from this lake. Mark well the prediction.

When this already “Great North-west” is thus settled and developed—when iron shall link its commerce and that of the Pacific with the commerce and wealth of Lake Superior —who will specify the mighty agencies they will bring into play in the final settlement, development, manufacture and business of the country on this lake, and especially that embraced within the Upper Peninsula. During the summer months it will become the oasis of the travelling world by thousands, for recuperation and healthy enjoyment; its wonderful deposits of copper, which had been regarded more as fiction than real, will be seen in their better development; the iron mountains will tell their own silent but mighty story; capital will be unlocked and enter practically into the final development of the whole. The thrift and happiness of its people will attract multitudes to join them in all the various pursuits that are or can be successfully 31 followed. The copper will be smelted at home, and the ingot will go into western as well as eastern marts. Iron ore will be manufactured into pig —into cast iron in every form—and into merchant iron, and find a market west and south, as well as east. Its population will have swelled from a score of thousands into hundreds

of thousands, surrounded with health, wealth and happiness, with churches, schools and colleges—the best basis of free institutions.